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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,343	07/14/2001	Anjali Chandnani	063170.6288	3770

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BAKER BOTTS L.L.P.  
2001 ROSS AVENUE  
SUITE 600  
DALLAS, TX 75201-2980

EXAMINER
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PYZOCHA, MICHAEL J

ART UNIT	PAPER NUMBER
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2137

NOTIFICATION DATE	DELIVERY MODE
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07/21/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com  
glenda.orrantia@bakerbotts.com

<b>Office Action Summary</b>	<b>Application No.</b> 09/905,343	<b>Applicant(s)</b> CHANDNANI ET AL.	
	<b>Examiner</b> MICHAEL PYZOSHA	<b>Art Unit</b> 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-22 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 1-14, 16-22 and 24 are pending.
2. Amendment filed 05/23/2008 has been received and considered.

***Claim Rejections - 35 USC § 101***

3. The rejection under 35 U.S.C. 101 has been withdrawn based on the filed amendment.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 7, 8, 10-14, 16, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chess et al. (US 6711583) in view of Yamamoto (US 5881151) and further in view of Van De Vanter (US 5737608).

As per claims 1, 13, 14, 16, and 24, Chess et al. discloses preparing language description data corresponding to at least one script language; preparing detection data for viral code corresponding to the script language virus; and analyzing a data stream using the language description data and the detection data to detect the script language virus (see column 4 lines 22-61 where a macro is a script and the system must have

language description data to prepare the detection data which is the data stored in database 204).

Chess et al. fails to explicitly disclose the use of lexical analysis as part of the virus detection.

However, Yamamoto teaches lexically analyzing a data stream to identify the at least one script language; lexically analyzing the data stream using the language description data to generate a stream of tokens; and analyzing the stream of tokens using the detection data and the language description data to identify the virus (see column 4 line 47 through column 5 line 3).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use lexical analysis to find the viruses in the script language of the Chess et al. system.

Motivation to do so would have been to be able to check the validity of all vocabulary words of the source program (see Yamamoto column 4 lines 59-67).

The modified Chess et al. and Yamamoto system discloses analyzing the stream of tokens but fails to disclose lexically analyzing the stream of tokens.

However, Van De Vanter teaches lexically analyzing a stream of tokens (see column 4 lines 61-62).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the lexical analysis of a stream of tokens to detect the script viruses of the modified Chess et al. and Yamamoto system.

Motivation to do so would have been detect changes to the stream of tokens (see Van De Vanter column 3 lines 22-30).

As per claim 7, the modified Chess et al., Yamamoto and Van De Vanter system discloses setting definition rules for each of the at least one script language (see Chess et al. column 4 lines 22-61).

As per claims 8 and 22, the modified Chess et al., Yamamoto and Van De Vanter system discloses the detection data comprise at least one test wherein each of the at least one test correspond to a pattern match or a CRC check (see Chess et al. column 4 lines 22-61).

As per claims 10-12, the modified Chess et al., Yamamoto and Van De Vanter system discloses converting the data stream to a stream of tokens using lexical analysis that correspond to respective language constructs (see Yamamoto column 4 line 47 through column 5 line 3) and performing a CRC to detect viral code (see Chess et al. column 4 lines 22-61).

6. Claims 2, 3, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Chess et al., Yamamoto and Van De Vanter system as applied to claims 1 and 16 above, and further in view of Session (Session 19: Intro to Compiler Design).

As per claims 2, 3, 17, and 18, the modified Chess et al., Yamamoto and Van De Vanter system fails to explicitly disclose that the language description data are dynamic finite automata.

However, Session teaches the well-known concept in the art that lexical analysis may rely on dynamic finite automata in order to recognize tokens in a language.

Furthermore, the dynamic finite automata may be used to construct string matchers.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the dynamic finite automata in the modified Chess et al., Yamamoto and Van De Vanter system.

Motivation to do so would have been that it provides an efficient means for recognizing tokens and constructing string matches.

7. Claims 4-6 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Chess et al., Yamamoto and Van De Vanter system as applied to claims 1 and 16 above, and further in view of Raduchel et al. (US 6418444).

As per claims 4-6 and 19-21, the modified Chess et al., Yamamoto and Van De Vanter system fails to explicitly disclose that the description data correspond to language definition rules and check rules wherein the language definition rules include description of constructs of the target script language and relationships between the constructs.

However, Raduchel et al. teaches such rule checking (see column 13 lines 4-43).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the language checks of Raduchel et al. in the modified Chess et al., Yamamoto and Van De Vanter system.

Motivation to do so would have been prevent programs that can pose risks to a computer system because they do not conform to the language standard (see column 1 lines 39-52).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Chess et al., Yamamoto and Van De Vanter system as applied to claim 1 above, and further in view of Bernhard et al. (US 6609205).

As per claim 9, the modified Chess et al., Yamamoto and Van De Vanter system fails to explicitly disclose obtaining samples of viral code; analyzing the obtained samples; and setting a detection regimen that includes at least one pattern match or CRC check based on the analysis of the obtained samples.

However, Bernhard et al. teaches such steps (see column 2 lines 14-28).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to additionally use the methods of Bernhard et al. in the modified Chess et al., Yamamoto and Van De Vanter system.

Motivation to do so would have been to consolidate the reference signatures (see column 2 lines 34-45).

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-14, 16-22 and 24 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PYZOCHA whose telephone number is (571)272-3875. The examiner can normally be reached on Monday-Thursday, 7:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJP

/Emmanuel L. Moise/  
Supervisory Patent Examiner, Art Unit 2137